

EXTRACTS.

A BOATING SONG.
A noisy chaff in a stream was lying—
A chaff with a silicon sail;
In a forest of fire the day was dying,
And daintily stirred the gale;
When a maiden fair and a gallant gay
Sprang into it lightly, and sailed away—
Away through the purple gloaming.
No man looked down from the vaulted heaven,
They sailed by the light of stars—
By the smile seruive of the sister sun,
And the ruddy glow of Mars.
But the stormy rose in his grandeur grim,
And the waves swam into the distance dim—
As they tossed in the troubled water.
The tempest ceased, and the broad, deep river
Flowed on with unruffled breast;
Asia in high heaven the sisters quiver,
And the wild winds sink to rest.
There is calm below, there is peace above,
And the eyes of the maiden are full of love;
As she sings to her happy lover.

They hear the boom of the mighty ocean;
Their little bark breasted its swell,
And westward glides with a gondola, gentle,
But whether? I cannot tell.
We know love's stream is not smooth for aye;
But the sweet wave abhors as they sail away—
Or the ocean of life together.

F. D. DAVYON.

THE STEAM ENGINE.

SUPERSEDED.

Mr. Bourne, C.E., the Principal of the now Engineering College at Maxwell Hill, and the well-known author of various practical works on the steam engine, has, we are informed, been engaged during the past year in perfecting a new species of heat engine, which it is expected will supersede the steam engine for nearly all the purposes for which that is at present employed. It has long been known that the steam engine is a most wasteful machine, not more than one-tenth of the theoretical efficiency of the heat expended being obtained in even the best engines, the other ninetieths being wasted. It has also long been known that power cannot be generated by heat unless there be two unequal temperatures, and that it is in the act of falling from the high temperature to the low that the heat is transformed into power. The further removed these two temperatures are from one another, the larger will be the proportion of the total heat transformed into power; and it is because in the steam engine these two temperatures are not far apart, that the heat is wasted to so serious an extent. The maximum temperature in a steam engine is the temperature of the steam, which may be 250 degrees or thereabouts, and the minimum temperature, which is that of the condenser, may be 100 degrees; so that the total fall from the highest temperature to the lowest may not be above 150 degrees. The power generated by this inconsiderable fall will not be great, which is not more than the power will be great which is got from a low fall of water by any hydraulic machine. But the conditions under which steam can be worked in an engine imply limited extremes of temperature, and therefor a large expenditure of fuel to generate a given amount of power. To enable higher temperatures to be employed in engines for the generation of power, air has been proposed as a substitute for steam, and air engines have been contrived by Shilling, Ericson, Joule, and others. But the difficulty of heating the air by any species of air heater and of preserving the piston in a working condition at high temperatures has so seriously impeded the advantages of these contrivances, that they have never come into extended use. Under Mr. Bourne's arrangement these objections are avoided. There is no air boiler, but the fuel is injected into a small chamber, so that the heat is generated internally instead of being transmitted through heating surfaces. The maximum temperature employed is the temperature of flame. But the engine is so contrived that the piston is not subjected to any higher temperature than is usual in steam engines. An engine constructed upon this principle may be made so compact and so light as to be applicable to many purposes for which steam engines cannot be used, such as flying, tramway locomotion, and the propulsion of tricycles, while the economy of fuel will be such, by reason of the high temperature employed, that a very inexpensive performance will be obtained. We are unable at present to say anything in regard to the details of this invention, which we believe, will not be made public for some time. —Glasgow Mail.

THE BAD BOY'S BICYCLE.

"I should think you would learn after a while that he's too old to fool around as he did when he was a boy," said the grocer man, as he got away from the boy for fear he would be scolded. "That's what I told him when he wanted to try my bicycle," said the boy, as he broke out laughing. "He saw me riding the bicycle, and said he could do it as well as I could, if he could once get on, but he couldn't spring up on it quite as spry as he used to, and he wanted me and my chum to hold it while he got on. I told him he would get hurt, but he said there couldn't no boy tell him anything about riding, and so we got the bicycle up as fine a shade-tree, and lie put his feet on the treadles and he turned to turn his head. Well, honest, I shut my eyes, 'cause I didn't want to see pa get tied up a knot. But he did. He pushed with one foot, and the bicycle turned sideways; then he pushed with the other foot, and it began to wiggle; and then he pushed with both feet and pulled on the handles, and the front wheel struck an iron fence, and as pa went on top of the fence the wheel seemed to rear up and kick him, and pa hung to the fence and the bicycle hung to him, and they both went down on the sidewalk, the big wheel on pa's stomach, one hand up his trouser's leg, the other hand down his coat collar, and the other wheel rolling around back and forth over his fingers, and he yelling to me to take it off. I never saw people tangled up the way pa was, and the bicycle 'cause I told him he better keep off of it. I think if men would take advice from boys often they wouldn't be so apt to get their suspensions caught on an iron picket-fence and have to be picked up in a basket. But there is no use of us boys telling a grown person anything, and by keeping still and letting them break their bones, we save getting flogged. It would do some men good to be boys all their lives, then they wouldn't have to initiate. Hello, there goes the police patrol wagon, and I am going to see how it rides on the back step, and the boy went out and jumped on the hind end of the wagon, and then picked himself up out of the mud and felt of his head when the policeman's club dropped on it. —Peek's Sun.

THE CHILDREN'S WORLD.

Which of us, possessing a lovely plant in all its beauty of full blossom, would, in his senses, destroy it? Yet the child's bright face, its habits of impurity, its life of small romances, are blossoms at the mercy of all parents, and many of them unthinking jockeys are jointly masters of the situation. If at present there can be no kind of doubt; and that many of them are greater gamblers on nine runs out of every ten run than their masters is just as little to be questioned. Formerly trainers and jockeys were the servants of their employers; but now, so indifferent are the greater number of the latter to their status in society that they actually salute them with a warm shake of the hand, and makes the little ones older than lie years, calculating in its attachment, selfish, and artificial. Its instinct is to be open-hearted, to accept everything that comes as a means to pleasure, look upon everyone it meets as a kind adviser, and, if possible, a playmate. Punishment, therefore, startles these intuitions away. It opens up a dreary prospect of the possibility of mistakes in its friendships, develops an unnatural regard for consequences, and destroys every blossom that makes the young plant beautiful. Let any adult watch an unspotted child as it plays and he will find that it is living in another world than his. Within the limits of a single room it has gardens and seaside, rides in steamboats, and railway trains, sings in church, attends Christian parties, buys and sells, nurses and prescribes. Even a corner of a room suffices to hold all this, and over so much more. There, by itself, its own name and personality changed for the nonce, the small thing imagines its romance, evolves out of a toy of bricks a society of its own, and finds all its little world upon a yard square of carpet. The real world full of men and women have nothing to do with it, except as relative to itself. It recognises no necessity for them; they are dull people, the grown-ups, for, for they talk about matters that are impossible to understand, and take only an obviously superficial interest in playthings. Everyone should remember that this is how children live. They are in our world, but not intended by nature to be of it. Their mission is to be as happy as they can; their only duty to put off becoming acquainted with sorrow as long as possible; and, recognising this, no grown-up person has any right to bring shadows into the sunny atmosphere of childhood. That this is not always possible is of course obvious, for children are perpetually longing for that which they cannot, for their own sakes, help having, and yet at Newark the stirrings of horses, in many cases of double, woe and even more than that, which are under the charge of a single trainer. 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